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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/532,352	03/21/2000	Kogo Endo	9319S-000127	7425

7590 01/29/2003

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EXAMINER

LESPERANCE, JEAN E

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/532,352

Applicant(s)

ENDO ET AL.

Examiner

Jean E Lesperance

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 March 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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DETAILED ACTION

Drawings

This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

The previous Non-Final rejection is withdrawn and another Office Action is provided below

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-31 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent # 5,777,610 ("Sugimoto et al.") in view of U.S. Patent # 6,067,062 ("Takasu et al.").

As for claims 1, 2, 4, and 11, Sugimoto et al. teach four first flexible wiring boards 19 each of which is mounted with a drive IC 16 for outputting a signal for driving the display panel 11 (column 10, lines 47-49) corresponding to a driver integrated circuit mounted on an extended area an edge of the substrate, said extended area provided in at least a margin of said display panel; along the sides 12a and 12b are arranged circuit boards 14 and 14 having circuit wirings 141 and 142 for supplying a control signal to the

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drive ICs 15 and 16 respectively (column 10, lines 53-59) corresponding to wherein a circuit board having electronic components thereon is provided above said driver integrated circuit and substantially within said extended area, the circuit board connected to said driver integrated circuit; and while the input terminals 107 are connected with corresponding electrode terminal 105 provided in an end portion of the circuit board 14 extending alongside of the display panel 11 (column 11, lines 30-35) corresponding to an input unit for inputting a signal to said display device; liquid crystal display device is provided with a display panel 11 constituted by sealing liquid crystals in a space between its glass substrates 11a and 11b (column 10, lines 40-42) corresponding to wherein said display device is accommodated in a casing. Accordingly, Sugimoto et al. teach all the claimed limitations as recited in claims 1-2 and 11 with the exception of provided an electrooptic material layer sandwiched between a pair of substrates disposed opposite to each other.

However, Takasu et al. disclose an opposed substrate 12 opposed to the semiconductor device 11 and an electrooptical material layer or liquid crystal layer 13 interposed between the semiconductor device 11 and the opposed substrate 12 (column 10, lines 4-8) corresponding to an electrooptic material layer sandwiched between a pair of substrates disposed opposite to each other.

It would have been obvious to utilize the electrooptic material layer as taught by Takasu et al. in the lightweight display device disclosed by Sugimoto et al. because this would allow one substrate of which comprises a substrate having at least a portion being electrically insulating.

As for claims 3 and 12, Sugimoto et al. teach a display panel 11 (Fig.4) corresponding to a display panel including: glass substrates 11a and 11b (Fig.4) corresponding to a first and a second substrate opposed to each other; on the y-axis the substrate 11b is extended further than the substrate 11a (Fig.4) corresponding to a first extended area provided in one of two adjacent margins of said display panel wherein the first substrate extends further than an edge of the second substrate; on the x-axis the substrate 11b is again extended further than the substrate 11a (Fig.4) corresponding to a second extended area provided in the other of the two adjacent margins wherein the second substrate extends further than an edge of the first substrate; a plurality of electrode terminals 102 via IC circuit 15 (Fig.4) corresponding to scanning electrodes formed on a surface of the first substrate opposed to the second substrate; a plurality of electrode terminals 102 via IC 16 (Fig.4) corresponding to data-signal electrodes formed on a surface of the second substrate opposed to the first substrate; a drive IC 15 for outputting a scanning signal for driving the display panel 11 (Fig.4) corresponding to a scanning driver integrated circuit connected to said scanning electrodes, the scanning driver integrated circuit being mounted on the first extended area; and a drive IC 16 for outputting a display panel for driving the display panel 11 (column 10, lines 48-49) corresponding to a data-signal driver integrated circuit connected to said data-signal electrodes mounted on the second extended area; along the sides 12a and 12b are arranged circuit boards 14 and 14 having circuit wirings 141 and 142 for supplying a control signal to the drive ICs 15 and 16 respectively (column 10, lines 53-59) corresponding to wherein a circuit board having electronic components

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thereon is provided at least above said scanning driver integrated circuit mounted in said first extended area or said data-signal driver integrated circuit mounted in said second extended area so as to be essentially within a plane region of either extended area; and input terminals 107 drives IC 15 (column 11, lines 49-50) corresponding to an input terminal portion of said scanning driver integrated circuit mounted in said first extended area and input terminals 301 drive IC 16 (column 11, lines 44-45) corresponding to an input terminal portion of said data-signal driver integrated circuit mounted in said second extended area are connected to an output terminal portion of said control circuit board.

As for claims 5, 14, 20-22, and 27, Sugimoto et al. teach the electrode terminals at both ends of the control board 17 are connected with the terminals on one side of the control board 17 of the circuit wiring 141 and 142 on the circuit board 14 by the connector 18 (column 13, lines 38-41) corresponding to said control circuit board further comprises a circuit-wiring pattern formed on a flexible insulating resin substrate and electronic components provided for controlling a driving of said display panel.

As for claims 6, 13, and 15, Sugimoto et al. teach a control board 17 mounted on one of said first extended area Fig.4 (18) and said second extended area Fig.4 (18) corresponding to said control circuit board, mounted on one of said first extended area and said second extended area, extends so as to be connected to an end of an input wiring portion formed close to a shorter side of the other of said extended areas.

As for claims 7, 16, 23, and 28 Sugimoto et al. teach along the sides 12a and 12b are arranged circuit boards 14 and 14 having circuit wirings 141 and 142 (column

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10, lines 53-55) corresponding to said control circuit board which inherently has a multilayer structure having an insulating layer interposed between a plurality of wiring layers in which predetermined upper and lower wiring layers are connected via a through hole.

As for claims 9, 18, and 30, Takasu et al. disclose an opposed substrate 12 opposed to the semiconductor device 11 and an electrooptical material layer or liquid crystal layer 13 interposed between the semiconductor device 11 and the opposed substrate 12 (column 10, lines 4-8) corresponding to said electrooptic material layer is a liquid-crystal layer.

As for claims 10, 19, and 26, Takasu et al. teach an electrically insulating transparent carrier layer (column 44, lines 35-67) corresponding to said electrooptic material layer is an electroluminescent light-emitting layer including a electroluminescent material.

As for claims 8, 17, 24-25, 29, and 31, Sugimoto et al. teach the input terminals of the adjacent terminal board, connected portions of the junction and input terminals of the adjacent flexible wiring boards being located on the peripheral portion of the display panel (column 23, lines 5-9) corresponding to said control circuit board includes a flexible input wiring portion.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jean Lesperance whose telephone number is (703)

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308-6413. The examiner can normally be reached on from Monday to Friday between 8:00AM and 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (703) 305-4709 .

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

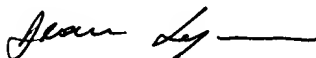
or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Jean Lesperance



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Date 1-23-2002



RICHARD HJERPE
SUPERVISOR
TECHNOLOGY CENTER 2600

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